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EDWARD ROBINSON SQUIBB, M.D.

THE AMERICAN JOURNAL OF PHARMACY

SEPTEMBER, 1901.

EDWARD ROBINSON SQUIBB, M.D.¹

BY JOSEPH P. REMINGTON.

Edward Robinson Squibb was born in Wilmington, Del., July 4, 1819. His parents were James R. Squibb and Catherine H., his wife. His early education was received in Wilmington, and at the age of eighteen he was apprenticed to Warder Morris, a druggist in Philadelphia, and from 1837 to 1842 he learned the drug business with the houses of Warder Morris and J. H. Sprague.

He had long desired to acquire a medical degree, and he rightly judged that there could be no better preparation for his work than experience in the drug business. In addition to this, as his parents' means were slender, he could earn something, and, at least, be self-supporting during these early years of study.

As is so often the case with distinguished men, these early years were not marked by any especial aptitude for medicine or pharmacy, as he was himself frequently heard to declare. In 1842, at the age of twenty-three, he matriculated in Jefferson Medical College, of Philadelphia, and received the degree of Doctor from that College on March 20, 1845.

His steadiness and ability were at once recognized by his *Alma Mater*, and he was elected Assistant Demonstrator of Anatomy, Curator of the Museum and Clerk of the Clinic.

He practised medicine in Philadelphia until 1847, when he con-

¹The accompanying likeness of Dr. Squibb first appeared in the *Medical News*, November 3, 1900, the photograph having been made two years before Dr. Squibb's death.—EDITOR.

cluded to enter the Navy, and, passing the examination before the Naval Board, received his commission as Assistant Surgeon in the United States Navy on April 26, 1847, the document bearing the signature of James K. Polk, then President of the United States, and J. Y. Mason, Secretary of the Navy.

At the close of the Mexican War he was assigned to service on U. S. Brig "Perry;" subsequently, the "Perry" was engaged in breaking up the South American slave trade, which was then actively carried on by vessels owned in the United States. He saw active sea service for four years, and became, as he often said, very tired of having so little to do. In January, 1852, he was fortunately ordered to the Naval Hospital in Brooklyn, which at that time had for its Director, Dr. Benjamin Franklin Bache, a worthy member of a distinguished family whose services to their country should never be forgotten.

While serving in the Navy, Dr. Squibb had abundant opportunities of observing the poor quality of many of the medical supplies furnished to the Navy; these goods were bought upon the contract system, and from the lowest bidders; but through the efforts of Dr. Bache, Dr. Squibb and other officers, Congress was induced to make an exception in the case of medical supplies and gunpowder, and "quality first and price second" became the rule of the Department.

In addition to this, the Navy Department was authorized to establish a pharmaceutical laboratory for the manufacture of important articles on the list of naval supplies. This laboratory was organized, built and equipped with the names of Dr. Benjamin Franklin Bache as Director, and Dr. Edward Robinson Squibb as Assistant Director, in 1852. At this time, ether was coming into general use as an anæsthetic, and it was here, probably, that ether was first made by steam heat, thereby lessening the great danger of explosions and accidents through the inflammability of the liquid and its vapor. But one thing is certain, that Dr. Squibb gained in his small laboratory a practical knowledge and experience in manufacturing which was destined to yield enormous results.

The success of this laboratory induced Dr. J. Lawrence Smith to make a proposition to build, equip and start a similar enterprise in the city of Louisville, Ky. Dr. Squibb accepted the proposition, and in 1857 he resigned his commission in the Navy and returned to civil life.

In 1858, the naval laboratory, having proved its value to the government, attracted the attention of the War Department, but opposition to the establishment of an army laboratory was developed, and Dr. Squibb was induced by Dr. R. S. Satterlee, Chief Medical Purveyor of the Army, to establish a laboratory of his own, and sell to the Army such of the products as might be required.

Towards the close of the year 1858 the four-story brick building, No. 149 Furman Street, Brooklyn, was secured, and Dr. Squibb at last found himself in the position towards which he had been looking forward for many years, that of owning and directing a laboratory where he would be untrammelled by traditions of any kind, and have the opportunity of establishing his own standards. This laboratory had for its nucleus the furnishing of such supplies to the Army as were needed, but it could readily be seen that the medical wants of an army of 25,000 men would not support even a laboratory of this size. The medical profession of Brooklyn at once took a great interest in this movement, and success was fairly in sight, when, on the evening of December 24, 1858, the building was entirely destroyed by fire, and the owner so badly burned that his life was despaired of for many months; but his strong constitution, the enthusiastic attentions of his medical friends in Brooklyn, coupled with the devoted services of his wife, saved him. But his face and hands were badly disfigured for life through the burning ether which was thrown on his face.

The accident occurred through the carelessness of one of the employees overturning a bottle of ether on the counter, the liquid quickly taking fire from an alcohol lamp which was burning some distance away. Dr. Squibb's face and hands were very badly burned in attempting to save his books, and when he emerged from the building he could scarcely be recognized. Kind friends took him home, and his wife was summoned, she happening to be with her sister at the time. A sad shock awaited her when she found the doctor lying quietly on his bed, but suffering terribly. It was undoubtedly the saddest Christmas Eve that they ever experienced. For months his life hung in the balance, and when he emerged from his room, no trace of his once handsome features remained. His eyelids were everted permanently, and for many years he was compelled to wear protectors when out in the open air, during the

winter season. This accident greatly influenced the doctor's future life. Having a sensitive disposition, he shrank from publicity, and when he was compelled to meet strangers, he knew that even if they were polite enough not to ask him the cause of his disfigurement, that they would feel a curiosity to know the details of the accident. A little incident which occurred when the writer was crossing in the ferryboat in company with the Doctor will illustrate some of the daily annoyances to which he was subjected. A badly bred young girl, noticing his eye protectors, rushed up in front of him, and barring his way as he passed through the cabin, exclaimed loudly, "Why just look at this man; he's got no eyes!" The doctor simply and quietly said, "No, little girl, I can see well enough;" but the cheerful tone of his conversation stopped instantly, and it could be easily seen why he never cared to be prominent in such mixed company. He never spoke of these annoyances, and rarely alluded to his accident, and then never complainingly. The tears ran from his eyes continually, some of the ducts being partially destroyed or injured permanently. And when to this is added the fact that for forty-two years he was compelled every night to strap his eyelids together with strips of isinglass plaster in order to obtain rest for them, one can form some idea of the lasting results of that unfortunate Christmas Eve fire.

His indomitable spirit, however, was not quenched; he set to work with more determination than ever. His medical friends never deserted him; they furnished him capital, and by the middle of 1859 the laboratory was rebuilt and active work resumed. Upon the outbreak of the Civil War, in 1861, the needs of the Army became very large, and additional buildings were hired and equipped, and for the time, run night and day, but under such disadvantages that in 1862 another site was purchased and a large and commodious laboratory was erected on Doughty Street, Brooklyn, which was occupied January 1, 1863.

These laboratories have been models ever since their erection. Their massive walls and foundations and solid floors bespoke the character of the man. Nothing for show or ornament, but everything for simplicity, stability and strength.

Dr. Squibb had an especial aptitude for devising apparatus, and he not only exercised his talents in this direction constantly, but he was willing to give freely the result of his labors to any who called

upon him. He more than once furnished working plans to his competitors in business for the famous apparatus for making ether. He did not believe it proper from a scientific point of view, to withhold any secrets in manufacturing from those who were interested in the work. The files of the AMERICAN JOURNAL OF PHARMACY reveal many cuts and drawings which were used to illustrate his numerous pharmaceutical papers, which he freely furnished to his friend, Prof. William Procter, the former editor of this publication.

We find by consulting this JOURNAL that his first paper was published in 1855, and was entitled "Preparation of Citrate of Iron and Quinine and its Constituents." After this appeared the following:

- 1855. Examination of the Sulphate of Quinine of Powers & Weightman.
- 1856. Elementary Analysis of Sperm Oil.
On Spiritus Aetheris Nitrosi.
Apparatus for Preparing Ether by Steam Heat.
Improved Method for Carbon and Hydrogen Determination in Organic Analysis.
- 1857. Examination of Grain Weights.
Extractum Colocynthis Compositum.
Oleum Aethereum and Spiritus Aetheris Compositus.
On Tinctura Ferri Chloridi.
On Hydrargyrum cum Creta and Pilulæ Hydrargyri.
On the Manufacture, Impurities and Tests of Chloroform.
- 1858. On the Purification of Liquids in a State of Vapor.
On a New Apparatus for Rectifying Spirits.
On the Process of Percolation.
- 1859. On the Revision of the U. S. Pharmacopœia.
- 1860. On Opium as a Therapeutic Agent.
Observations upon Some Formulæ and Processes that may be Brought Forward for Admission into the Next Pharmacopœia.
- 1861. On Oleum Aethereum.
- 1863. On Statistics and Assay of Virgin Scammony.
On Extractum Cinchonæ Fluidum.
- 1864. On Permanganate of Potassa.
- 1866. Economy of Alcohol in Percolation in Making the Fluid Extracts.
Advice on Epidemic Cholera.

1867. Letter Relative to Alcoholic Extract of Colocynth.
On an Improved Formula for Fluid Extract of Buchu.
Pharmacy of the Cinchonas.
Calx Saccharatum and Syrupus Calcis.
1868. On the Economy of Alcohol in Percolation.
On the Preparation of Resin of Podophyllum.
On Podophyllum Pills.
On Commercial Jalap.
Syrupus Ferri Iodidi.
On Syrupus Calcis.
1869. On Carbolic Acid or Coal Tar Creosote.
On the Contamination of Hydrochloric Acid with Oxides
of Sulphur.
1870. On Liquor Opii Compositus.
1872. Note on Pareira.
1878. Fluid Extracts by Repercolation.
Hydrobromic Acid.
1879. Minim Pipettes.
1882. Opium Assay.
1884. Aconite Root.
1887. Cascara Sagrada.
1888. Notes on Antipyretics.
1890. Pharmacopœial Revision and Assays.
1895. Improvement in the Manufacture of Acetone.
1896. Acetone and Acetone Chloroform.
1898. Acetic Acid as a Menstruum.
1899. Acetic Acid as a Substitute for Ethyl Alcohol in the
Extraction of Drugs. First and Second Papers.
1900. Acetic Acid as a Substitute for Ethyl Alcohol in the
Extraction of Drugs. Third and Fourth Papers.

He joined the American Pharmaceutical Association in 1858, becoming a life member in 1900. He received the unusual compliment of being made Vice-President at the first meeting at which he was elected a member. The proceedings of the Association contain many papers of great practical and scientific value emanating from his pen. It is hardly necessary to say that he was many times asked to accept the presidency, which he always politely declined.

The papers which he contributed to the American Pharmaceutical Association were as follows:

1858. On Preparations of the Pharmacopœia.
1860. On Oleum Aethereum.
Remarks on the Sale of Poisons.
Remarks on the Subject of Alcohol.
1861. On Virgin Scammony.
On Bleaching Morphine Sulphate.
1862. On Amendments to Processes of the Pharmacopœia.
Preparations of Metallic Mercury.
1863. Report on Drug Market.
1865. Economy of Alcohol in Repercolation.
Remarks on Revenue Law.
Remarks on Vacuum Apparatus.
On Press Cloths.
1866. Improved Process for Fluid Extract of Buchu.
Report on the Internal Revenue Law.
1867. Commercial Jalap.
Repercolation.
1868. Contamination of Hydrochloric Acid with Oxides of
Sulphur.
Hydrocyanic Acid.
Note on Carbolic Acid.
Note on Rhubarb.
Specimens of Indigenous Drugs.
1869. Note on Rhubarb.
Report on Pharmacopœia.
1870. Fluid Extracts and their Menstruum.
Note on Rhubarb.
Remarks on Chloral.
Aconite Poisoning.
1871. Cantharides and a Blistering Liquid.
Chloral.
Commercial Bicarbonate of Soda.
Extract of Jalap.
Fluid Extract of Senega.
Litmus Paper.
Pareira.
Rhubarb.
1872. Citrate of Bismuth and Ammonia.
New Form of Percolation.

- Note on Aconite Root.
- Note on Aloes.
- Note on Rhubarb.
- Note on Triplex Pills.
- Acid Phosphoric Glacial.
- 1873. Bumping of Distilled Spirits.
- Ergot and its Preparations.
- General Apparatus Stand.
- Note on Rhubarb.
- Physicians' Pocket Cases.
- 1876. Administration of Phosphorus.
- Revision of the Pharmacopœia.
- 1877. Salicylic Acid.
- 1878. Fluid Extracts by Repercolation.

On January 1, 1882, Dr. Squibb commenced the publication of a pharmaceutical journal which he called *An Ephemeris*. The announcement, which he wrote (see page I of the journal), is so thoroughly characteristic that the following abstracts are here quoted: "It will be sent gratuitously to all. No subscribers are solicited, nor any subscription list kept, nor are exchanges with other journals asked for. It may be issued bi-monthly or quarterly, or irregularly, or not at all, as the occupations of a very busy life may determine. The contents should be accepted, if at all, as information—not as knowledge. To the professions of Medicine and Pharmacy then, whatever may be here offered is respectfully dedicated by the writer and his two sons."

The publication of the *Ephemeris* afforded Dr. Squibb and his sons an outlet for the dissemination of a vast deal of information which came to them in the course of their business and professional lives. Five volumes had appeared up to the time of his death, and 2551 pages, and the journal has always proved a most welcome visitor to the members of both professions.

Dr. Squibb possessed in a remarkable degree, the faculty of imparting information. It may be said that he always took delight in explaining in detail the working of an apparatus, a process, a theory, or in fact, anything which had been to him a subject of thought or labor. Many of his papers have seemed to thoughtless or uninterested readers to be prolix or verbose, but his large experience had taught him the value of detail in his business. He had spent

thousands of dollars in devising apparatus, only to find that some important detail had been omitted, and time had been lost and money wasted until the defect was remedied, and if the careless reader had realized these facts, criticism would certainly have been withheld.

Sterling honesty, and right because it was right, were his guiding principles. If an error occurred in making a preparation in the laboratory, the standing rule was to report it at once. The writer well remembers an occasion when some mistake was made in the menstruum for a lot of fluid extract of cinchona. It contained possibly 10 per cent. too much or too little alcohol. The culprit, a most worthy German pharmacist, appeared before the doctor and confessed his sin. Without a moment's hesitation the doctor said, "That's too bad, that's too bad; empty it all down the culvert;" and fully \$500 worth of fluid extract of cinchona found its way into the East River.

The writer had the hardihood to ask the doctor, a week after the occurrence, why this had been done. The answer has never been forgotten. He admitted that it would be possible to make an equal lot of fluid extract of cinchona with the menstruum so altered that when the two were mixed the result would have the proper alcoholic strength; he turned almost fiercely and said, "Such work can never be done in this laboratory. These mistakes are costly, but the example and lessons to be learned are valuable, and I will not permit a patched up fluid extract to leave this place." He never referred again to the incident, but it may well be said that mistakes of that kind were never made again.

When the College of Pharmacy of the City of New York was younger and lacked the financial support it has since secured, Dr. Squibb gave it his services as a teacher without remuneration. This was in 1869-71, when the faculty consisted of Professor Chandler, Professor of Physics and Chemistry; Dr. Squibb, Professor of Pharmacy, and Dr. Day, Professor of Botany and Materia Medica. At a meeting of the college, held in October, 1900, it was resolved to present an engrossed testimonial to Dr. Squibb, the occasion of this token of appreciation, being the rounding out by the Doctor of his four score years.

He was a member of the American Medical Association, the New York State Medical Association, the Kings County Medical Asso-

ciation, and a life member of the New York Society for the Relief of Widows and Orphans of Medical Men. He was elected an honorary member of the British Pharmaceutical Conference in October, 1872, and an honorary member of the Pharmaceutical Society of Great Britain on May 1, 1878. The degree of Master in Pharmacy was conferred on him February 6, 1894, by the Philadelphia College of Pharmacy. He was elected a member of the American Chemical Society on March 3, 1877. He was a resident member of the Linnean Society in New York, a life member and Fellow of the Brooklyn Institute of Arts and Sciences, a Fellow of the American Association for the Advancement of Science, and a member of the American Philosophical Society of Philadelphia.

Dr. Squibb took a most active part in the development and improvement of the United States Pharmacopœia since the 1860 Revision. He was a member of the committee at that time, but in subsequent revisions he declined membership in the committee, but, nevertheless, rendered most valuable service until almost the day of his death.

An incident in connection with Pharmacopœia revision in 1860 was told the writer by Professor Procter, and it is reproduced because it is characteristic of the man. The meetings of the Committee were held periodically in Philadelphia, and Dr. Squibb came over from New York and spent the day in the Quaker City with his friend Procter. The meetings were held at Dr. George B. Wood's residence. The subject under discussion on one occasion was aloes, Dr. Squibb stating that the commercial aloes which came to this market was filled with mechanical impurities of all sorts—sticks, stones, earth, goatskins, bits of iron and lead, etc., etc. Dr. Wood, Professor Procter, Alfred B. Taylor, and other members of the committee thought that Dr. Squibb was exaggerating, and one of them said playfully, that New York aloes might have all of those impurities in it, but he did not believe that the aloes imported into Philadelphia was of that character. Thus challenged, Dr. Squibb promptly asked Professor Procter to buy the best cask of aloes he could get in Philadelphia, on his account, ship it to New York, and he would melt and soften the aloes, adding alcohol and water, strain it, weigh the impurities, ascertain the percentage, and send to the committee the record with the package containing the debris, accompanied by a sample of the purified product.

The result was profoundly surprising to the committee. It showed conclusively that there was not an original package of aloes brought into the country which was not loaded up with gross impurities. The committee acknowledged the result of the doctor's work, and Aloe Purificata has been retained in every revision of the Pharmacopœia since.

In reviewing the life of Dr. Squibb, one cannot help being impressed with his striking individuality. He never forgot or minimized the importance of his mission. He consecrated his life to the object of furnishing honest medicines for the relief of disease, and naturally his laboratory work had the first place; morning, noon, and night found him there. Habits of order and cleanliness he instilled in all who were under his guidance or instruction. He hated a lie, even a little one, and he was always the soul of honor. To many he appeared to be stern; it was true he was never yielding or weak. One could almost say in advance just where to place Dr. Squibb upon any question. He delighted in original investigation and chemical research if they had any bearing upon making medicines. Abstract subjects he took little interest in, although he was fond of arguing upon such subjects, but he would not waste time upon anything which he did not believe productive of results of immediate practical value to mankind.

His standards of purity for pharmaceutical products were the highest attainable, and he believed that if he was to work long enough and hard enough, keeping his eye single to this one object, the time would come when his labors would be recognized, and it can safely be said that he lived to see the time when they were not only appreciated by his fellows, but substantially rewarded.

His liberality in giving aid to all who were in sympathy with his life purposes was shown at all times. He never hesitated to share with others the benefits of his great ingenuity and wide experience, but probably his greatest influence in the advancement of chemical science lay in the encouragement and assistance which he gave to young men, so that his services to the profession were far reaching, not only on account of the enormous volume of work which he himself accomplished, but also because he enabled others to do much.

In the latter part of his life, a number of years were spent in foreign travel, in Europe and the Orient, Russia, Norway and

Sweden, Germany—in fact, there was scarcely a country which he had not visited.

He died early in the evening of October 25, 1900, at his home, 152 Columbia Heights, Brooklyn, after only a few hours' confinement to his room; his suffering was mainly due to difficulty in breathing. The immediate cause of his death was cardiac dyspnœa, due to occlusion of the coronary artery.

Dr. Squibb enjoyed excellent health during the greater part of his life. He took regular exercise in his gymnasium until his eyesight failed, and he was thus incapacitated. He bore suffering stoically. He was very punctual in his habits, keeping his engagements conscientiously, and followed a regular plan, with fixed times for performing his duties, and his industry was amazing. He had a natural taste for art and was an excellent judge of painting, of which he was especially fond. Without being luxurious in his tastes, and knowing the value of works of art, he enjoyed the possession of the rare and beautiful objects, which denotes a cultured and refined mind. He married, on October 7, 1852, Caroline Lownds Cook, daughter of Elisha Worth Cook and Lois Crowell Cook, of Philadelphia. His widow and the following three children survive him: Edward Hamilton Squibb, M.D.; Charles Fellows Squibb and Mrs. John Munro (Mary King Squibb). The sons were graduated from Harvard University, and both have succeeded to the business founded by their father.

American Pharmacy lost one of its greatest exponents and its sturdiest figure when the summons came by the grim messenger, to a higher life. Eighty years were vouchsafed to him, and he was honest, not from policy, but because it hurt him sorely to be otherwise, and surrounded as he was by those who sought temporary advantage by questionable business practices, trickery or even doubtful methods, his life work was carried on in the face of active warfare. It would be impossible for any one to meet him and then forget him; he stamped his personality indelibly on one's memory. He was a leader among leaders.

He might wound the feelings of some by the frank, outspoken condemnation of what he believed to be wrong, but it was the sin and not the sinner that he denounced. It would be impossible for him to yield to any course of doubtful morality. He often stood alone and would make no effort to win others to his views when

they were founded on principle and the *rock of truth* itself. In non-essentials he would often yield because he knew that the great principles for which he contended, would be all the stronger if he did not degenerate into a mere pessimist or chronic objector. He loved to quote when standing alone, bereft of the support of his friends on some important question, the famous words of the orator, "*God and one are a majority.*"

THE INTERNATIONAL PHARMACEUTICAL CONGRESSES.

BY DR. FR. HOFFMANN.

(*Concluded from p. 383.*)

A FURTHER MOVE TO HAVE THE CONGRESS MEET IN THE UNITED STATES.

The choice of Milan as the place for convening the seventh meeting of the International Pharmaceutical Congress had been made without a preceding invitation by, or inquiry at, Italian pharmaceutical associations. The choice, however, was politely accepted by them and a general committee on organization formed consisting of Professors *Cannizzaro*, of Rome, *Vitali*, of Milan, *Dr. Pessina*, of Milan, and Messrs. *Castoldi* and *Venturini*, of Milan. This committee, as well as that of the Pharmaceutical Societies of Lombardy, made strenuous efforts for a creditable and successful consummation of the duty imposed upon them. Invitations were sent out, but again repealed and the time of meeting postponed for another year. In 1889 a new law affecting the admission to, and the exercise of, the practice of pharmacy had been promulgated in Italy and engaged the interest and anxiety of the pharmacists to such an extent that they felt little disposition to diverge their attention and concern to outside affairs. In consequence the committees formed failed to meet with the requisite encouragement and support by both the authorities and the pharmacists.

In 1889 the committee by a circular letter again postponed the meeting to 1891 on account of the International Exposition taking place in Paris in 1889. In this circular a remarkable departure occurred both in the matter of the objects and in the choice of the participants of the congress. As entitled to admittance the follow-

ing were designated : Professors of universities, polytechnic schools and colleges, professors of physical and natural sciences of any school, pharmacists and chemists delegated by pharmaceutical associations or by sanitary boards, members of such boards, assistants of institutes, laboratories or museums devoted to physical and natural sciences, medicine or pharmacy, chemists, directors and assistants of municipal laboratories, proprietors and directors of all laboratories for public service, proprietors and directors of chemical industrial establishments and chemists employed in such.

As stated on pages 324 and 379 the *American Pharmaceutical Association* had twice extended an invitation to the congress to meet in the United States, in 1874 and in 1881. At this juncture of delay and uncertainty, and in consideration of the prospective World's Fair in Chicago in 1893, the association passed at its meeting in Old Point Comfort in Virginia, September 12, 1890, the resolution "that it would be desirable that the International Pharmaceutical Congress meet in Chicago in 1893, that a hearty invitation be extended to the pharmacists of all countries to be present at the meeting of this association in 1893; and that a committee be appointed to report upon the matter at a future meeting."

At the next meeting of the association, in New Orleans in April, 1891, the following local committee to co-operate with the World's Fair Auxiliary in the work of preparing for an International Pharmaceutical Congress was elected : Messrs. *O. Oldberg, E. H. Sargent, A. E. Ebert, D. R. Dyche, C. S. N. Hallberg*, all in Chicago.

Very likely in consequence of the action of the American Pharmaceutical Association in its meetings in 1890 and 1891 the following circular letter was issued on May 15, 1891 :

The directors and proprietors of Italian pharmacies, especially those of the northern provinces of the Kingdom, perturbed by the changes of the material conditions of pharmacy, brought about by a new law of December 22, 1888, for the protection of public hygiene and sanitation, and by legal contests with the authorities over the new and stringent exactments, have not been able to co-operate towards the success of the Pharmaceutical Congress in Milan, to the extent they promised before the new law went into effect.

Notwithstanding these difficulties, the Committee on Organization would have persevered in its efforts, had it not been for the very discouragingly small number of adherences received, every hope of success being thus cut off. Despite the announcements and invitations made in the principal Italian and foreign periodicals, and the 25,000 circulars forwarded, the committee received scarcely thirty assents.

The committee, therefore, resolved to postpone the convocation of the Congress to a more opportune time.

[Signed]

Cannizzarro, Vitali, Pessina, Castoldi, Venturini.

Hereupon and perhaps being unaware of the previous efforts made for having the Congress meet in the United States of America, the general secretary of the Parisian pharmaceutical societies, Mr. H. *Bocquillon-Limousin*, addressed, July 1, 1891, a circular letter to the presidents of the various pharmaceutical societies, asking for opinions and advice as to the desirability of a speedy meeting of the Congress for the consideration of those questions which affect the immediate interests and prosperity of the pharmacists, and of completing the work initiated by previous congresses. In the event of approval, Madrid or Prague were suggested as convenient places for holding the meeting.

To this communication the following response was returned from the United States of America :

The undersigned beg to acknowledge the receipt of your circular letter of July 1, 1891, and to state in reply thereto, that by a resolution passed at the meeting in September, 1890, the *American Pharmaceutical Association* has expressed itself in favor of holding the next International Pharmaceutical Congress in 1893, in the city of *Chicago*, during the time of the *Columbian Exposition*.

This resolution has been communicated to Mr. *Van de Vyvere*, Secretary-General of the Sixth International Pharmaceutical Congress, and to Professor *Cannizzarro*, President of the Committee on Organization for the seventh congress.

At a meeting held May 1, 1891, the American Pharmaceutical Association appointed a committee for perfecting the arrangements for the contemplated pharmaceutical congress at Chicago, and invitations will be issued at an early date. We beg you to use your influence and that of your Society in favor of holding the next International Pharmaceutical Congress in Chicago, in the year 1893.

[Signed]

A. K. FINLAY,

President.

JOHN M. MAISCH,

Secretary.

NEW ORLEANS and PHILADELPHIA, September 5, 1891.

To this communication the following reply was received by the President of the American Pharmaceutical Association:

We have duly received your letter, in which you communicate to us the resolution passed by the American Pharmaceutical Association, inviting the pharmacists of all countries to a congress which is to meet in Chicago, in 1893.

Since we do not know whether the Italian committee will convene the Seventh International Congress, we have confirmed to the same your decision, and have requested the committee, in case the pharmacists are not to be convened at Milan, to cede to you the powers received from the International Congress of 1885.

[Signed]

D. A. VAN BASTELAER,

President.

E. VAN DE VYVERE,

General Secretary.

BRUSSELS, November 26, 1891.

Early in 1893, the presiding officers of the American Pharmaceutical Association, and the local committee on the Seventh International Pharmaceutical Congress appointed by the Association, issued separately the following circular letters of invitation in three languages, to the pharmaceutical societies and other organized bodies of pharmacists, as well as to the pharmacists of all countries.

PHILADELPHIA, March 30, 1893.

The *American Pharmaceutical Association* had extended an invitation to the Third International Pharmaceutical Congress, held at St. Petersburg, in 1874, to call the Fourth Congress in Philadelphia, in 1876, during the Centennial Exposition; but the selection of a city in the United States was deemed unadvisable at that time.

After it had been decided that the World's Columbian Exposition should be held in the city of Chicago in 1893, the American Pharmaceutical Association again invited the pharmaceutical congress to meet in this country. The Italian Committee on Organization having, by circular of May 15, 1891, and for reasons stated therein, renounced the convocation of the Seventh International Pharmaceutical Congress at Milan; the Executive Committee of the Sixth Congress, at Brussels, by letter of November 26, 1891, confirmed the invitation of the American Pharmaceutical Association, and in a communication of February 16, 1892, the former Committee on Organization at Milan, expressed the view that there was nothing, under the circumstances stated, to prevent the organization of the Seventh International Pharmaceutical Congress in 1893, in Chicago.

Now, in view of the above facts, the undersigned officers of the American Pharmaceutical Association take pleasure in extending a hearty invitation to the pharmaceutical societies of all countries to appoint delegates to the International Pharmaceutical Congress, which is to assemble in the city of Chicago during the year 1893, and in which teachers to pharmaceutical institutions and pharmacists in general are likewise cordially invited to participate.

It is especially desired, that the contents of this circular letter be brought to the notice of kindred societies, and that information be given to the undersigned secretary, relating to suggestions of subjects of general importance, suitable for discussion and action by the Congress, as well as to the intention of pharmaceutical societies, of teachers of pharmacy and pharmacists in other countries, of being present or represented at the Congress of 1893.

"Further steps for promoting the objects and deciding upon the date of the congress will be taken at the meeting of the American Pharmaceutical Association at the meeting in July of the present year. Meanwhile, the undersigned desire to assure all who may come as delegates, as members or as visitors, to the International Pharmaceutical Congress, at Chicago, in 1893, of the very cordial reception on behalf of the Pharmacists of the United States of America.

[Signed] ALEX. K. FINLAY,
President of the American Pharm. Association.

JOHN M. MAISCH,
Permanent Secretary.

CHICAGO, May 26, 1892.

The *American Pharmaceutical Association* has invited the Seventh International Pharmaceutical Congress to meet in the city of Chicago during the season of the World's Columbian Exposition, in 1893; the assent of the Executive Committee of the Sixth Congress at Brussels, and its Committee on Organization at Milan, has been formally given, and the American Pharmaceutical Association has appointed a special committee to arrange the preliminaries.

In the performance of its function, this committee has the honor, therefore, to invite all pharmaceutical societies and other organized bodies of all countries to appoint delegates to the Seventh International Pharmaceutical Congress, to be held in Chicago in 1893; and an invitation is also extended to all teachers in pharmaceutical schools and members of pharmacopœial commissions to participate in the congress.

The precedents established by previous International Pharmaceutical Congresses will be followed in regard to all preliminaries as far as practicable.

On behalf of the American Pharmaceutical Association, all who will honor the occasion by their presence are assured of a most hearty welcome.

By the committee :

[Signed] OSCAR OLDBERG,
Chairman.
ALBERT E. EBERT,
Secretary.

These letters of invitation were accompanied by a preliminary announcement and programme, containing among others the following items:

"The general scope and object of the International Pharmaceutical Congress will be to stimulate pharmaceutical progress, to discuss the status of pharmacists and promote an intelligent appreciation of the work they do, and to consider matters and measures affecting the further advancement of pharmacy and a nearer approach to international agreement in education and practice.

"The subjects to be considered by the congress will be classified into the following four sections: (1) Historical and ethical pharmacy; (2) pharmaceutical education and legislation; (3) pharmacopœial matters; (4) general questions pertaining to pharmacy and not assignable to any of the three preceding sections.

"The congress will be constituted of delegates accredited by the governments of the various countries, of the pharmaceutical societies, of examining boards,

of colleges of pharmacy, of pharmaceutical departments of universities, and of national pharmacopœial commissions. It is proposed that each of these bodies should be represented by three delegates.

"The proceedings of the congress shall be in the English language and interpreters shall be employed for the benefit of German, French and Spanish visitors for translating letters, papers, etc.

SEVENTH CONGRESS IN CHICAGO, 1893.

The congress assembled in first session, August 21, 1893. Great Britain, Canada, Nova Scotia, Holland, Belgium, Austria, Sweden, Norway, Costa Rica, the Bermudas and Australasia were represented by twenty delegates, the United States by 114. Not represented were Germany, France, Russia, Italy, Spain, Portugal, Denmark.

The meeting was opened with addresses by the Chairman of the Local Committee, Professor *Oldberg*, of Chicago; Mr. *Carteighe*, President of the Pharmaceutical Society of Great Britain, and Professor *Patch*, President of the American Pharmaceutical Association. The nomination of officers resulted in the election of Prof. *Joseph P. Remington*, of Philadelphia, as President, and of fifteen vice-presidents and four secretaries.

The main interest of pharmaceutical gatherings in Chicago in the month of August, 1893, had been exhausted by the meetings of the American Pharmaceutical Association immediately preceding the International Congress, which was little more than a supplementary function to the meeting of the National Association. Its proceedings fell far short of adequately dealing with the imposing array of subjects drawn up under four sectional divisions.

The first question considered was: What progress has been made toward the preparation of an international pharmacopœia for potent remedies?—The few who participated in the discussion agreed in the opinion that an international pharmacopœia including all important pharmaceutical remedies and suitable to all countries would be impracticable, whilst an international conspectus of potent remedies, as a standard for the various national pharmacopœias, would be attainable, so as to approach in the course of new revisions of the same to greater uniformity of the composition and strength of galenical preparations containing potent drugs. As a result of the brief discussions the following resolutions were adopted:

That a commission be empowered by this congress to compile and publish an international pharmacopœia; that this commission consist of one represen-

tative from each of the countries represented in this congress, and from other countries as may hereafter be determined.

That a committee of five, of whom the President of this congress shall be chairman, be now chosen, and that said committee shall decide what other countries besides those here represented shall be invited to join in the work. The committee shall also determine how the members of the commission shall be appointed.

That this congress accept, with thanks, the proffer of the American Pharmaceutical Association of the sum of \$1,000 to help in defraying the expenses of compiling, publishing and distributing an international pharmacopœia.

The drafts heretofore offered and accepted at the congresses at St. Petersburg (page 374), and at Brussels (page 381), had failed of realization.

As a nucleus of an international pharmacopœia commission, Messrs. *Remington*, of the United States of America, *Carteighe*, of Great Britain, and *von Waldheim*, of Austria, were proposed and elected as members.

The second question discussed referred to pharmaceutical education and examination, and to a compulsory curriculum. Notwithstanding the great divergences of opinion and usages prevailing in the various countries, the following resolutions were finally agreed upon :

"No person should be admitted as an apprentice in pharmacy unless he shall have given evidence, by satisfactory passing a preliminary examination, that he possesses a general education sufficient for that purpose, and as advanced as the conditions of the practice of pharmacy in each country may permit, and this term of apprenticeship in pharmacy should in no case be counted so far as it may antedate such evidence of sufficient preliminary education.

"The compulsory period of apprenticeship should be no less than four years, including the time devoted by the apprentice to regular attendance upon a course of instruction in a college or school of pharmacy.

"Recognizing the inadequacy of examinations as a means of determining the qualifications of persons seeking the important privilege of dispensing and compounding medicines, this Congress approves of the establishment of a compulsory curriculum of pharmaceutical education, and holds that no person should be regarded as a qualified pharmacist who has not pursued to completion a systematic course of instruction in the various branches of pharmaceutical sciences, and delegates in this Congress are requested to lend their aid toward securing the recognition of a principle of so much fundamental importance to pharmacy."

The third and final question from the comprehensive array of the programme was the relation of the pharmacist to public sanitation, particularly in the matter of the adulteration of food. After brief

discussion the following resolution was offered by a committee of five and adopted :

"That, in the judgment of this Congress, the educated pharmacist is a natural and proper expert on measures for public health, not only in prevention of food adulteration, but in the inspection of water supplies, the enforcement of good sewerage, etc. The pharmacist, by virtue of his profession, is the common chemist to the common people."

The President of the Congress called attention to one important subject of the programme, namely, the influence exerted upon the practice of pharmacy by the introduction of chemicals and other medicinal substances controlled or limited by patents, copyrights, trademarks or other legal restrictions.

Should such limitations as foster monopoly in the manufacture and sale of such medicinally used products be removed in the interest of the public good?—The fact was, as shown by Mr. *Wm. Bode-mann*, of Chicago, at the preceding meeting of the American Pharmaceutical Association, that the price of most synthetic products imported into the United States is very largely out of proportion to their cost of production and real value.

No action, however, was taken upon this subject, nor was the perennial topic of specialties and nostrums entered upon, likely as being a rather delicate object in a country where this much-abused form of medication has attained to such a dominant position.¹

At the second session of the Congress the Hanbury gold medal for distinguished services in the domain of pharmacognosy was presented by the President of the Pharmaceutical Society of Great Britain, Mr. *Michael Carteighe*, of London, to Prof. *John M. Maisch*, who, on account of serious illness, was unable to attend the meetings in Chicago. Professor *Remington* responded in correspondingly graceful words to the generous presentation, and accepted the medal with thanks and appreciation to deliver the same to the recipient.

At the conclusion of the meetings an executive committee of the

¹ At its stated meeting in the Profile House, July, 1892, the American Pharmaceutical Association had unequivocally expressed its censure on nostrums by the adoption of the following resolution : "That the American Pharmaceutical Association desires to record its appreciation of the ethical position taken by the American Medical Association at its last meeting in its efforts to discourage the use of secret remedies and the traffic in nostrums."

Seventh International Pharmaceutical Congress was appointed, consisting of the President and acting Secretary of the Congress, Professors *Remington*, of Philadelphia, *Oldberg*, of Chicago, and Messrs. *Carteighe*, of London, *Ramlot*, of Brussels, and Professor *A. B. Prescott*, of Michigan. This committee was authorized in due time to provide for the assembling of the next Congress in such a manner as they might deem appropriate, and to represent the Seventh Congress until its successor shall have been convened.

EIGHTH CONGRESS IN BRUSSELS, 1897.

Upon the invitation of the Belgian General Pharmaceutical Association the Eighth International Pharmaceutical Congress met for a second time in Brussels in August, 1897. The meetings were well attended, mostly by Belgian pharmacists. The number of foreign delegates and visitors was a comparatively small one. They came from France, Holland, Great Britain, Italy, Sweden, Bulgaria, Mexico, Russia and the United States (Professor *Remington*, Philadelphia, Mr. *Meyer*, New Orleans). No pharmaceutical societies from Germany, Austria, Russia, Switzerland, Great Britain, etc., were represented by delegates.

Like the first Congress in Brussels, in 1885, this one was also patronized by the Government and the Secretary of Public Health welcomed the Congress at its opening session in a brief address. Professor *Ranwez* of the University of Louvain, acted as president and Mr. *Duyck*, of Brussels, as general secretary.

The deliberations were conducted in the French language and in these six sections:

(1) Legislation and professional interests ; (2) Practical pharmacy, chemistry, pharmacognosy ; (3) Examination of food ; (4) Hygiene ; (5) Bacteriology ; (6) Toxicology.

As main questions for deliberation were proposed in the programme the following ones :

(1) Is it desirable in consideration of the present state of knowledge to establish a definite standard of strength in active constituents of drugs and the pharmaceutical preparations made therefrom ?

(2) Is it necessary to establish uniform methods for the quantitative estimation of the active principles of drugs and preparations made therefrom ?

(3) In what way is the practice of pharmacy to be best regulated in the interest and for the safety of the public ?

(4) How can the manufacture and trade in the newer remedies be best regu-

lated? Is it compatible with the public interest to protect such remedies by patent rights and trademarks?

(5) Can the manufacture and the dispensation of organo-therapeutic preparations be retained in the hands of the pharmacist? In what way can the quality of these products be controlled and guaranteed?

(6) What methods are the best for bacteriological investigations of potable waters? Are the present methods sufficiently reliable?

The chairman, Professor *Ranwez*, opened the Congress, August 14, 1897, by a brief review of the history of the general Pharmaceutical Society of Belgium, just celebrating its fiftieth anniversary, and introduced the discussion on the first two questions, stating that they had occupied the consideration of the preceding congresses as well as that of Applied Chemistry held at Paris in 1896. The various speakers agreed in the desirability of attaining to uniform methods of the standardization of potent drugs and chemicals. It was, however, admitted that by the adoption of a strict dosimetric and pharmaco-dynamic system the pharmacist might be reduced to a mere dispenser of ready-made factory products. Attention was also called to the fact that in a number of important drugs it was not the principal alkaloids or glycosides that constitute their therapeutical value, but the total amount of active principles contained therein, as also that not a few vegetable drugs were subjected to prevailing variations in climate, soil, moisture, their handling in preparation for the market, and that there were cases of exemption from general rules and principles in standardization.

Ultimately the recommendation was adopted "that the respective authorities should require a uniform percentage of active important principles in medicinal preparations."

Question 3 was briefly discussed, particularly in regard to the practice of pharmacy by physicians and other unqualified persons associated with proprietors of pharmacies.

The limitation of the number of pharmacies in proportion to the population was considered by most speakers as unnecessary for the interest of the public and the pharmacist, provided that there is adequate provision for proper education and qualification. Under these conditions limitation was held by most speakers to be a retrograde step in every respect.

A brief discussion on pharmaceutical education and examination added nothing new to the deliberations on this subject by the previous congresses.

The perennial question of an international pharmacopœia seemed to have lost much in interest. Professor *Remington* read a paper on the relations between pharmacists and physicians in connection with pharmacopœial revisions; he advocated the principle of differentiating the domain of the practitioner of pharmacy and that of the practitioner of medicine as being an efficient means of promoting the interests of pharmacy and the mutual relations of the pharmacist and physician in their professional bearings as well as in the work of the revision of the pharmacopœia.

Professor *Remington* also read a brief report as chairman of a standing committee of three appointed at the Congress meeting in Chicago in 1893, consisting of Messrs. *Remington*, of Philadelphia; *Carteighe*, of London, and *Waldheim*, of Vienna, stating that in consequence of the illness of the latter, and the great difficulties in corresponding with associations and authorities in distant countries, little progress had been made.

The suggestion made prevailed "that it might be a subservient step towards attaining to a greater uniformity in the pharmacopœial formulæ to have an international committee of prominent pharmacists as an advisory body for co-operation with the committees of pharmacopœial revision in the various countries; and that in any such work a larger representation of practical pharmacists and teachers of pharmaceutical branches was desirable.

Questions 4, 5 and 6 were only briefly discussed as somewhat irrelevant and of less interest and consequence. In regard to organo-therapeutic remedies it was considered as impracticable to establish definite rules inasmuch as their active principles as yet are insufficiently known and as their therapeutic action can only be estimated by physiological tests and much less by analytical examination.

In regard to the newer remedies the following resolutions offered by Mr. *Hayn*, of Antwerp, were adopted:

(1) That the distinctive properties and reactions of each new remedy should be published on the label and in all circulars relating to the remedy.

(2) That central laboratories be established for the analysis and control of new remedies.

(3) A standing committee for the study and examination of all new medicinal products should be established, the members of which should be appointed by the different governments from the members of the academies of medicine or of pharmacopœia committees.

(4) There should be an official control and verification of serums and the various glandular juices, etc.

(5) The nomenclature of new remedies should be revised and controlled in order to avoid duplicity or confusion of names and errors.

(6) The pharmacopœias of every country should be provided with an annual supplement.

In regard to the question of nostrums the resolution was adopted that national and local pharmaceutical associations should co-operate with the medical societies, with the object of suppressing quackery and the use of nostrums.

The question on specialties was again discussed with the customary animation and dissension. Finally the resolution prevailed, "that in all countries laws should be inaugurated that all specialties should publish on their labels and in circulars the active constituents they contain and the average dose."

In conclusion the city of Paris was selected for holding the next Congress in 1900.

NINTH CONGRESS IN PARIS, 1900.

The Ninth International Pharmaceutical Congress was the second meeting of these conferences in Paris and at the time of an International Exposition, as also of a series of other international congresses.

The programme sent out with circular letters of invitation by the French local committee deviated still more from the preceding ones and contained quite an array of miscellaneous questions grouped into four sections. These were: (1) Pharmacy and pharmaceutical chemistry; (2) Materia medica and pharmacognosy; (3) Biological chemistry, bacteriology, hygiene and hydrology; (4) Professional interests. A number of communications and papers printed in advance was received and referred to the respective sections. Each section held separate sessions.

The Congress convened in Paris, August 2, 1900. The majority of visitors were Frenchmen; no special differentiation was made between delegates and visitors. Authorized delegates from foreign pharmaceutical associations were present from the following countries: Belgium, ten; Germany, five; Austria, two; Switzerland, three; Roumania, two; Russia, one; Mexico, one; Sweden and Norway, three; Denmark, two; Italy, three; Greece, one; Spain, two, and Holland, two. Officially not represented were Great Britain and the United States of America. No government was officially represented.

The inaugural meeting took place in one of the halls of the Paris School of Pharmacy on August 2d. President *Petit* being in the chair, and Mr. *Cronin* acting as secretary.

The first subject brought to discussion was the chronic question of an international pharmacopœia. Prof. *A. Tschirch*, of Berne, stated that all efforts ventured upon by any one of the preceding congresses had utterly failed in producing an international pharmacopœia or agreement for a uniform strength of potent remedial preparations, because only a limited number of countries was represented at the meetings, the propositions made were only fragmentary and not sufficiently studied beforehand, nor were the delegates in possession of official instructions from their governments. Therefore, every draft for an international pharmacopœia had been shelved with the resolutions passed and the meetings closed. He, therefore, suggested that this congress should send to the Belgian Government, which had the matter in hand, a communication containing the following proposition:

“That the governments of the countries most interested should each appoint at least two official delegates, and that the minor States should also send representatives. That the programme should be drawn up in detail, and studied by the delegates before the meeting of the congress, and that the fundamental principles of the programme should be communicated to the governing medical corporations of the countries represented, with the request that they should be considered and reported on. In addition to the official delegates representing the States, the principal academies of medicine and pharmaceutical societies should be asked to send delegates.” After quite a discussion on these propositions a committee consisting of nine delegates was appointed to consider the matter and to report at a later session of the congress. At the fourth session this committee proposed the adoption of the following recommendation:

“To have a comparative table prepared showing the differences in strength of medicaments bearing the same name in different pharmacopœias. To have this table distributed to the pharmacopœia commissions, to the academies of medicine and the pharmaceutical colleges and associations of the various countries with the request to take this matter into due consideration at their next pharmacopœia revision, and to adopt as much as possible a uniform standard of strength, and where differences still remain, to call attention to such in footnotes.

"To ask the Belgian Government to arrange with other governments a conference in Brussels, and to ask all the delegates appointed to such a conference to have their proposals ready to lay before the meeting whenever this may be called."

The next question discussed was the unification of assay processes with reference to the standardization of potent drugs and their pharmaceutical preparations, particularly such as contain alkaloids, glycosides and other definite principles capable of isolation and determination. This subject had been referred to this congress by the preceding one in Brussels in 1897; but nothing had been reported by the respective committee, leaving the matter just as it stood before. It was, however, properly suggested that this question would be settled with the appearance of an international pharmacopœia, and perhaps in advance by national pharmacopœias in course of their revision and publication.

Quite a number of papers were read or reports made on a variety of subject-matters relating to materia medica, to analytical and assay methods, to the practice of pharmacy, etc., most of which has since been published in pharmaceutical or chemical journals.

In section four, relating to professional matters, the present position of pharmaceutical education, the professional standing of the pharmacist in the various countries, and the limitation of pharmacies brought on a lengthy discussion introduced by a report on the educational methods and the compulsory examination in the principal continental countries, resulting in the customary resolutions dealing with the subjects altogether from a French and Belgian point of view.

Discussions on the questions whether apprenticeship should be placed before, during or after the academic instruction of the pharmacist, as well as disputes on the inspection of pharmacies, on trademarks and some other topics remained without result, likewise an exchange of opinion on standardization methods and on urinology.

In conclusion, the president, Mr. *Petit*, and the acting secretary, Mr. *Crinon*, addressed the meeting, giving a brief review of its proceedings and expressed the hope of meeting again at the next international pharmaceutical congress in some convenient continental city.

In a candid retrospect on the origination, the transactions and the success, or utter want of success, of the series of these so-called

international pharmaceutical congresses, commencing at Brunswick in 1864 and, as it is to be hoped, adjourned *ad infinitum* at Paris in 1900, it cannot but be conceded that they have failed to realize the anticipations once attributed to them and to bring about some practical or tangible results for the consolidation and advantage of pharmacy in the various countries in the course of the evolution through which it has been passing in the ways and byways of medical, sanitary and industrial progress. These congresses have never been international, except in name, either in representation or in numbers, and have more and more departed from their primary and essential aims and objects. Beyond the constantly recurring series of stereotyped questions and futile resolutions they have accomplished nothing of productive and enduring consequence.

Whilst the First International Congress originated in 1864, as a protest of French and German pharmacists against the growing nostrum evil and the initial stages of the modern industry of pharmaceutical specialties and proprietaries; it may not be amiss, in conclusion, to point to the striking fact that the Ninth Congress, in 1900, after a lapse of thirty-five years, presented the aspect of still indulging in unavailing deliberations on rather effete and doctrinal problems, while at the same time and place it was confronted by a kindred well attended congress of pharmaceutical manufacturers from twenty-six European, American and North African countries, convened for the purpose of securing for their calling and products (pharmaceutical specialties and proprietaries) a greater legal recognition as one of the substantial and important factors in the industrial, commercial and economic concerns of the world.

In addition it may also be mentioned as a sign of the altered conditions and the drift of modern medication that at the International Exposition in Paris, in 1855, ten years before the First International Pharmaceutical Congress took place, only five exhibitors of pharmaceutical specialties figured in the catalogue of the exhibition, whilst they numbered about 400 at the Exhibition in 1900 at the time of the Ninth Congress.

This remarkable transition in the domain and functions of pharmacy and medication to less orthodox modern methods and uses or abuses has been still more sweeping in the United States of America in the course of the second half of the nineteenth century.

The other primary motive for calling these congresses was the

desire for the creation of an international pharmacopœia, or at least of a code tending to bring about a greater uniformity in the formulæ for the potent pharmacopœial preparations. Every effort of the successive congresses for the realization of this desideratum by the adoption of resolutions and the appointment of committees has failed. Meanwhile the national pharmacopœias of the principal countries have in the course of periodical revisions attained to greater completion and a progressive and serviceable approximation of their formulæ for and the standardization of, potent remedies. This gradual approach to a desirable consummation is evident in the recently issued revised editions of the pharmacopœias of Great Britain with its addendum for the East Indian Empire, of Germany, and last but not least in the forthcoming eighth edition of the pharmacopœia of the United States of America.

BERLIN, April, 1901.

SYRUPUS FERRI QUININÆ ET STRYCHNINÆ PHOSPHATUM.

BY CHARLES H. LAWALL.

This preparation, which is of English origin, has been variously known as Easton's syrup, Aitken's syrup and syrup of triple phosphates and has always occasioned more or less discussion as to the method of producing a permanent preparation.

The earliest formula—that proposed by Dr. Aitken himself—possessed three distinct steps. First, the preparation of ferrous phosphate by precipitation of solution of ferrous sulphate with sodium phosphate. Second, the preparation of quinine alkaloid by treating quinine sulphate with ammonia water. Third, the solution of these well washed precipitates together with strychnine in diluted phosphoric acid; sugar was afterwards added and dissolved by agitation to form a syrup.

The original process was somewhat vague in its wording so that different manipulators obtained varying results, but it was no doubt intended that the preparation should contain the following ingredients in each fluid drachm—quinine sulphate 1 grain, strychnine sulphate $\frac{1}{8}\frac{1}{2}$ grain and ferrous phosphate 1 grain.

The trouble in making a permanent preparation probably started with the original formula, and for many years change after change was suggested, until, at the present time, the British Pharmacopœia and the United States Pharmacopœia both contain processes which are essentially different, and both of which have the same disadvantages regarding the lack of stability of the preparation.

The variation in the strength of the preparation since Dr. Aitken's original formula is noteworthy; the present U.S.P. giving a preparation which contains $1\frac{1}{8}$ grains of iron phosphate, $1\frac{3}{4}$ grains quinine sulphate and $\frac{1}{88}$ grain of strychnine to the fluid drachm; while the present B.P. gives 1 grain ferrous phosphate, $\frac{4}{5}$ grain quinine sulphate and $\frac{1}{32}$ grain strychnine to the fluid drachm.

Many authors considered the difficulty of precipitation as being due to the ferrous phosphate, so many changes were proposed in this ingredient some changing this ingredient to ferric phosphate which is the salt present in the U.S.P. preparation. Among the compounds of iron which were used may be mentioned ferrous sulphate, solution of ferric sulphate, solution of iron and sub-sulphate and at the present time the British Pharmacopœia directs the use of iron wire and phosphoric acid, thus forming ferrous phosphate; while the United States Pharmacopœia takes the scale salt, known as iron phosphate, which is in reality a citro-phosphate of ferric iron and sodium.

The British process was suggested by R. Wright at the British Pharmaceutical Conference in 1893; but the idea was first suggested by Simonson in a paper read before the Ohio Pharmaceutical Association in 1890; Wright, however, not giving credit to Simonson for the work previously done on the subject.

The most recent paper, which has dealt with the subject, is that of F. W. Haussmann in the AMERICAN JOURNAL of PHARMACY for May, 1900, in which he states that the main trouble is due to caramelization of the sugar, thereby causing the preparation to darken in color. He made some experiments with a view to reducing the quantity of acid in the preparation, but upon cutting down the amount of phosphoric acid, the preparation lost its former stability.

As it stands at present, the preparation is fairly permanent as far as precipitation goes, but is very prone to darken upon standing and the difficulty has been experienced of having sulphuretted odors evolved upon standing, in cases where the preparation has been made with the use of granulated sugar, which contained

ultramarine. Another trouble has sometimes been experienced which is caused by impurities in the glycerin, such as the presence of compounds of fatty acids, which are liberated by the phosphoric acid, thereby causing a disagreeable odor.

A suggestion as to the avoiding of the coloration, due to caramelization, which has given satisfactory results in practice, is a very simple one and consists in making up a preparation of the iron phosphate, quinine, strychnine and glycerin. This is made up according to the U.S.P. directions for making the syrup, but instead of mixing with the syrup right away, it is held in readiness for extemporaneous preparation of the syrup at any time necessary.

Divided up in this manner it will be seen that this glycerite makes approximately 250 c.c. and by making it up to that quantity with glycerin, which is the amount necessary for 1,000 c.c. of syrup, it can be held in readiness and used at any time in the proportion of one part of this so-called glycerite to three parts of pure simple syrup, both by volume. If this suggestion is followed no trouble will be experienced of having the product caramelized while in stock and it can always be sent out in a practically colorless condition.

This so-called glycerole has been made and kept in the undiluted condition for three months without alteration, so it is a practical means of overcoming a hitherto unsurmountable difficulty.

An experiment was made using glucose syrup as a base instead of ordinary syrup, but the presence of calcium sulphite as a preservative in the glucose made it very objectionable from the liberation of SO_2 by the action of the phosphoric acid.

The best results were obtained by the use of a syrup made from rock candy instead of the ordinary granulated sugar.

EDITORIAL.

THE AMERICAN PHARMACEUTICAL ASSOCIATION.

During the past year a number of writers have pointed out what seemed to be to them the needs of the American Pharmaceutical Association and, in some instances, have outlined methods to make it more successful numerically. One writer considers that it "needs new blood—good red blood" and another thinks it needs "the transfusion into its veins of some younger twentieth century blood."

These thoughts can be interpreted in several ways. According to the one the Association needs a vitalizing something and according to the other we must wait for a number of years for this new twentieth century blood to take on the responsibilities of manhood. A combination of the ideas of these writers—neither complete without the other—teaches that it is with associations as with men—they only are truly successful who so conduct their lives that they live to-day for to-morrow. The A.Ph.A. in other words needs the transfusion of new blood to-day for the good it will do to-morrow. This is in exact accord with the experience which teaches that leaders of associations, as well as masters of any undertaking, must have served a period of apprenticeship. New members must wait and learn before they can help in judiciously solving the great problems confronting large associations. If we think for a moment of the men at the helm of the A.Ph.A. we see men who are still active; men who have regularly attended the meetings and participated in its councils for years and men who have persistently looked after the interests and honor of the Association. Do we think for a moment that they have done this with an eye single to their own interests? Rather do we not see that they have done all this with a love for, and pride in, the Association. The A.Ph.A. stands for something to-day because there are many men who have served her in season and out of season. The new members, like the new blood corpuscles, must pass through a long and useful course and get in line (form a *rouleau*, so to speak) finally to be honored with true comradeship. The A.Ph.A. needs the blood, but it must do more than get it—it must see that it passes to this stage of usefulness.

There never was a time when all the members were so active in endeavoring to make the Association of value. The action of the Section on Scientific Papers, in limiting the time for the reading and discussion of papers, has made the meetings of this section of very great interest. We believe, too, that there never was a time when the work done in this section was more creditable to the Association and more beneficial to pharmacy at large than to-day. It is well known that at the Pharmacopœial Convention it was the active members of the A.Ph.A. that contributed so much to its success.

The section on Education and Legislation has had a beneficent influence on the teaching in colleges and on State Legislation. The

most important results of this section we believe, however, are yet to come. From this section has grown "The Conference of Teaching Faculties," "The Conference of Members of Boards of Pharmacy" and "The Conference of State Pharmaceutical Association Secretaries." There are many indications that the active members of the A.Ph.A. will contribute as much in elevating the educational courses at the various colleges and in conducting to a wise legislation in the various states in the future as they have in the past.

The Commercial Section has been productive to the Association in more ways than one. The creation of a section on Practical Pharmacy and Dispensing is largely the outcome of the work done by Mr. Hynson. This section has done much good already and is likely, through the Sander prize of \$50, to be productive of even greater good to the retail pharmacists of this country. Then there is the Committee on Exhibits who are arranging for an exhibition at the St. Louis meeting of drugs, chemicals, pharmaceutical preparations, dispensing apparatus, prescription helps, novelties in labels and dispensing, etc. The work of this committee promises to be very instructive.

When we consider all these profitable and interesting features it is apparent that the A.Ph.A. was never more alive than to-day. The following provisional program shows in what manner the St. Louis meeting will be one of profit and pleasure :

Sunday, September 15—Reception of incoming delegates.

Monday, September 16—10 A.M., Council meeting. 3 P.M., First general session. 8 P.M., Reception in parlors of Southern Hotel.

Tuesday, September 17—9 A.M., Session of Board of Trustees United States Pharmacopœial Convention. 10 A.M., Second general session. 3 P.M., Meeting of Commercial Section. 8 P.M., Visit to St. Louis Exposition and Music Hall.

Wednesday, September 18—9 A.M., Meeting of committee for revision of United States Pharmacopœia. 10 A.M., Third general session, devoted to discussion of exhibits. 3 to 10 P.M., Steamboat excursion on the Mississippi River.

Thursday, September 19—9 A.M., Meeting of the Conference of teaching faculties. 10 A.M., Meeting of section on practical pharmacy and dispensing. 3 P.M., Meeting of scientific section. 8 P.M., Meeting of scientific section.

Friday, September 20—9 A.M., Conference of members of boards of pharmacy. 10 A.M., Meeting of scientific section. 3 P.M., Meeting of section on education and legislation. 8 P.M., Meeting of section on education and legislation.

Saturday, September 21—9 A.M., Conference of state association secretaries. 10 A.M., Last general session. 2 P.M., Trolley ride; visit to Shaw's Garden and Anheuser-Busch Brewing Association plant. 8 P.M., Evening entertainment.

The A.Ph.A. is eliciting attention from every side. More than one member has gotten up circulars calling attention to the benefits of membership in the Association and many members not on the Committee on Membership are asking pharmacists to become members thereof. President Patton, of the Association, has well said in a letter which has been sent out to the retail pharmacists of the United States, "Its strong point is its earnest desire to aid you to become a better pharmacist, to the end that success and all that it implies may be yours."

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

DIE MIKROSKOPISCHE ANALYSE DER DROGENPULVER. Von Ludwig Koch. Leipzig: Gebrüder Borntraeger. 1901.

The third Lieferung of Volume I of this atlas is devoted to the consideration of the microscopical characteristics of the following barks: Quercus; and quillaja; and woods: Guaiacum, quassia and sassafras. This Lieferung, like the previous two already reviewed in this JOURNAL, gives an accurate description, besides numerous plates of the tissues or fragments to be found in powders of different degrees of fineness. These volumes will be found invaluable to the pharmacist and no doubt will have an extended sale, as there has been nothing like them heretofore published and the work has been well executed in almost every particular.

SELECT METHODS IN FOOD ANALYSIS. By Henry Leffmann and William Beam. Philadelphia: P. Blakiston's Son & Co. 1901.

This work gives a concise summary of analytical methods in food analysis. The subject is treated from a chemical and in many instances also from a microscopical point of view. Numerous illustrations and four full-page plates have been incorporated. The contents include: I, Analytic Methods: (1) Physical Data; (2) Chemical Data. II, Applied Analysis: (1) General Methods; (2) Special Methods for the following: Starch, flour, and meals, bread, leavening materials, sugars, honey, candies and confections; fats and oils; milk and milk products; tea, coffee and cacao; condiments and

spices; alcoholic beverages; flesh foods. An appendix of use ul tables, etc., concludes the book.

The work will prove of considerable value to analysts, particularly as many of the bulletins of the United States Department of Agriculture and of the Association of Official Agricultural Chemists are out of print and the others are with difficulty obtained. The authors' wide experience in practical analytical work and ability in culling the more valuable methods from the large amount of published matter, have particularly fitted them for the task in hand and the work has been done accordingly.

THE INDIAN DOCTOR'S DISPENSATORY being Father Smith's advice respecting diseases and their cure. By Peter Smith, of the Miami country. Cincinnati: Printed by Browne and Looker, for the author. 1813.

This is Bulletin No. 2 of the reproduction series of the Lloyd Library of Botany, Pharmacy and Materia Medica, Cincinnati, O. Peter Smith's dispensatory is probably the rarest book on pharmacy, there being but one copy known to be in existence. An interesting biography of Peter Smith, by Professor Lloyd, accompanies the volume. These reproductions can be had at the nominal price of \$1.00 per issue by addressing the Lloyd Library, Cincinnati, O. The third bulletin will probably consist of a facsimile of the *Materia Medica Americana*, by Schoepf, the first botanical work connected with American medicinal plants.

BILTMORE BOTANICAL STUDIES. A journal of botany embracing papers by the director and associates of the Biltmore Herbarium. Biltmore Herbarium, Biltmore, N. C. William Wesley & Son, London.

Volume I, No. 1, consists of "Revision of the Species of *Marshallia*," by C. D. Beadle and F. E. Boynton; "Notes on Certain Cone-flowers," by C. L. Boynton and C. D. Beadle; "New or Little Known Species of *Trillium*," by T. G. Harbison; "New Species of Thorns from the Southeastern States," and "A Shrubby Oak of the Southern Alleghanies," by C. D. Beadle. Eleven well executed plates on *Marshallia* accompany the number. Each one of these articles contains a number of new species which are well founded, and will stand the test of careful scrutiny which cannot always be said of new species that are being made. It is extremely fortunate that

the excellent work being done by Mr. Beadle, director of the Biltmore Herbarium and his associates, is being published and thus conserved and it is hoped that other numbers will quickly follow.

ILLINOIS PHARMACEUTICAL ASSOCIATION.¹

The twenty-second annual meeting was held at Rock Island, June 11-13. The President, Walter H. Gale, in his address approved of the action of the Association two years ago, when it decided to discontinue committees on scientific papers and other similar subjects, leaving to the A.Ph.A. scientific and educational matters. He felt that the I.Ph.A. should busy itself with trade and legislative matters.

In regard to the Illinois pharmacy law, he stated that the new law is much more satisfactory than the old one. President Gale also called attention to the *pure food law* now in force, and said that it contained but little of interest to pharmacists. The report of the operation of the law for twelve months shows that the only line of goods covered by the law in which pharmacists are interested (spices and flavoring extracts) generally come up to the required standard, the only exceptions being in some goods found in grocery stores. The president also called attention to the Illinois law covering the *sale of cocaine* and other similar narcotics. He said that 300 ounces of cocaine per month are sold on State Street within quite a limited district. He felt the present law was sufficient to meet the case if it can only be enforced.

The committee in reporting on this address, recommended that the Association issue a volume similar to the *Badger Pharmacist* of Wisconsin, and include the history now being prepared by A. E. Ebert, historian of the Chicago Veteran Pharmacists' Society.

Trade interests was the subject of separate papers by W. F. Bodeman and John Stucklich.

Mr. Bodeman said that he had been in this country thirty-four years and during all that time druggists cried hard times and compared trade with the good old times of early days. He urged pharmacists to write for journals and become better readers of pharmaceutical periodicals. He insisted upon hiring good apprentices and giving them the proper training, stating that the metric system should not be overlooked, and laid stress upon the importance of arithmetic. His parting advice was, let the druggists of this land get together and broaden their minds. Mr. Stucklich advocated judicious advertising by show windows, neat circulars, booklets, samples, newspapers, etc. Cash trade was approved; personal con-

¹ Meyer Bros. Druggist, p. 206; *Nat. Drug.*, p. 232; *West. Drug.*, p. 324.

duct given attention; the relation of doctor and druggist not forgotten. Such side lines as shoe polishes and stains, photographic goods and spectacles were named as worthy of trial. T. V. Wooten, Chairman of the Committee on Trade Interests, said that side lines were spoken of as the tendency of the hour, but rather deplored. He considered that dispensing physicians are increasing in number. He said self interests always point towards co-operation with the physician whenever possible. Substitution was condemned. Neat packages and uniformly good preparations were noted. He said that counter prescribing seldom pays in the long run. Farming out small retail stores by jobbers was condemned. Retailing by wholesalers received attention. Commercial pharmacy as a college course was emphasized.

Professor Oldberg, Chairman of the Committee on United States Pharmacopœia, presented a very comprehensive report, which was referred to the Committee of Revision of the United States Pharmacopœia.

The report of the Advisory Committee, Department of Pharmacy, University of Illinois, was to the effect that during the year the committee had conferred with the faculty of the school at Champaign and the Board of Trustees, and, as a result, the course has been extended, the faculty enlarged, and instruction in physiology added to the curriculum.

The following officers were elected for the ensuing year:

President, Walter H. Gale; Vice-Presidents, Henry Swannell, J. B. Mount and Franz Thomas; Secretary, R. N. Dodds, Springfield; Treasurer, George C. Bartells.

The time and place of the next meeting was left to the Executive Committee, to be appointed later by the president.

KENTUCKY PHARMACEUTICAL ASSOCIATION.

The twenty-fourth annual meeting was held at Crab Orchard Springs, June 18-21. The President, C. Lewis Diehl, in a very able address¹ in which he touched not only State but national affairs, said in part as follows:

"Next to the U. S. Pharmacopœia the National Formulary should appeal most forcibly to our sense of responsibility, but it is plain that in this respon-

¹*Ph. Era.*, p. 42.

sibility practitioners of medicine must share equally. Unfortunately the latter, as a class, have not taken very kindly to either of these authorities in recent years, though there are notable exceptions, and much missionary work seems to be necessary to convince them of their importance. Towards this our Association has also contributed its mite, through the excellent exhibit of N. F. preparations at the Paris meeting, and, more particularly, through our very efficient chairman of the Committee on Papers and Queries, Mr. Henry W. Preisler, who by his individual efforts has induced the physicians in his own locality to use many of the N. F. preparations, to the exclusion of corresponding proprietaries, and has thus set a practical example of what may be done. Last year your attention was called to an "Epitome of the National Formulary, compiled for the purpose of familiarizing physicians with the preparations of the N. F. The distribution of this little work is possible only through the aid of the State and local associations, and it is therefore a matter of regret that more definite action was not taken at last year's meeting with this end in view. I urgently advise that some action be taken at this meeting that shall assure its wide distribution among physicians of our State, feeling confident that this will be followed by a demand for many of the excellent preparations of the N. F.

"When the so-called proprietary specialties were in their incipency, the Louisville College of Pharmacy adopted a series of formulas for Elixirs and Wines, which, at the time, drove the proprietaries then in vogue from the local market. This Association afterwards adopted the same formulas, with some additions—testimony that Kentucky pharmacists were early alive to the importance of fighting the innovation of the specialty makers. Indeed, although the immediate incentive to the "National Formulary" is properly credited to the efforts of the pharmacists of New York and Brooklyn, who offered their "Formulary" to the American Pharmaceutical Association as a nucleus for a national work, this preliminary work of the Louisville College of Pharmacy doubtless had its influence on the character and contents of the National Formulary. But what I particularly wish to emphasize is, that although an apparent unit in upholding the integrity of the National Formulary individuals in our midst do not hesitate to use these formulas, under coined names and possibly slight modifications, for the exploitation of their private interests; and while it is difficult here to draw a line on purely ethical grounds, it is plain to me that co-operation on the lines of the "Golden Rule"—but not as interpreted by David Harum—would have salutary effect in maintaining the dignity of our profession."

The following papers were presented:

"Should Purity be the Prime Consideration?" By J. W. Gayle and Vernon Driskell.

"Buying Goods." By Addison Dimmitt and J. W. Gayle.

"How to Keep Good Clerks." By R. M. McFarland.

"Drug Store Rules." By Addison Dimmitt.

"The Pharmacist from a Professional and from a Mercantile Standpoint." By Vernon Driskell.

"The Dispensing Counter." By Vernon Driskell.

"Postage Stamps. Telephones, etc." By Vernon Driskell.

The following officers were elected for the ensuing year :

President, John L. Clark; Vice-Presidents, H. K. McAdams, G. E. Townsend and J. B. Ross; Secretary, J. W. Gayle, Frankfort; Treasurer, Vernon Driskell; Chairman of Executive Committee, Chas. A. Edelen, Louisville.

Grayson Springs was selected as the next place of meeting, time to be fixed by the Executive Committee.

LOUISIANA PHARMACEUTICAL ASSOCIATION.¹

The nineteenth annual meeting was held in New Orleans, May 10th. The President, M. Bernstein, recommended among other things that Congress be requested to assist in the passage of the bill defining the status of the navy pharmacist. Also that an act be drafted regulating the hours of labor, sale of poisons, the vending of drugs by country stores within a certain radius of a drug store and the examination of physicians who have opened drug stores since the passage of the law; also requiring all pharmacists to register annually, on payment of a nominal fee.

One of the features of the session was an address by Prof. H. V. Army, of Cleveland, O., on some of the chemical possibilities of Louisiana. He said that he would purposely omit sugar from his address, inasmuch as the subject could not be included within a brief paper. The speaker dwelt interestingly on the products that could be made from turpentine, namely, camphor, lavender perfume, etc. Another possibility was the development of the industry of making orange flower water from the petals of the orange blossom.

The following officers were elected: President, W. T. Taylor; Vice-Presidents, J. L. Viallon and Alfred Levy; Corresponding Secretary, Miss M. E. Holden; Recording Secretary, W. P. Duplantis; Treasurer, George S. Brown; Executive Committee, William M. Levy, P. Asher, James E. Bays, Adam Wirth and P. L. Viallon.

The following members of the Association were selected for the Board of Pharmacy: P. L. Viallon, President; W. T. Taylor, President *pro tem*; F. C. Godbold, Secretary; Examining Committee, George S. Brown, Chairman; William Levy, Max Samson; Fin-

¹ *Pharm. Era*, p. 547.

ance Committee, M. Bernstein, Paul Fleming and E. N. Roth. Examinations will be held in February, May, August and November.

MARYLAND PHARMACEUTICAL ASSOCIATION.¹

The nineteenth annual meeting was held July 16th, at Ocean City. The President, Wm. E. Turner, in his address recommended that the Legislative Committee organize auxiliary committees in every county of the State to go to work at once to bring the passage of a pharmacy law to a successful issue; that the next semi-annual meeting of the Association be held in Annapolis during the organization of the Senate and House of Delegates, and that "we strive diligently to more closely unite the profession of medicine and pharmacy, and that we co-operate with other bodies of a like character in the erection of a suitable memorial to Prof. Wm. Procter, Jr."

The Association decided to continue the agitation for a national pure food and drug law, as also to endeavor to have such a law enacted for Maryland.

The Treasurer reported a gratifying balance in the Treasury. The accessions during the year were larger than any preceding year, they amounting to 33 per cent. of the membership. The report on the Progress of Pharmacy was a most comprehensive and instructive paper. Under Trade Interests an animated discussion arose as to the affiliation with the N.A.R.D., ending in a resolution to that effect, as well as to the adoption of the Worcester plan, both meeting with the approval of a large majority.

The chairman of the Committee on Adulterations, H. P. Hynson, gave an account of the examinations made by himself of several popular preparations.

The subject of wood alcohol was touched upon. This dangerous substitute for grain alcohol had been found in the product of but one concern, although several others had been examined. One sample of essence of ginger was found to contain only 33 per cent. of ethyl alcohol, when the proportion should have been 95 per cent. Tincture of iron was examined, but none of the seven specimens submitted to tests contained wood alcohol. Several, however, contained not more than 55 per cent. of grain alcohol, when 75 per cent. was required by the United States Pharmacopœia. The quantity in one sample was not more than 5 per cent. Of six lots of tincture of iodine examined, two were made with wood alcohol, and all but three proved to be greatly deficient in iodine. Much adulteration was shown in the common seidlitz powders. The

¹ *Ph. Era*, p. 112.

number of samples with an over-weight in the quantity of the chemicals required was as large as that with insufficient quantities.

An animated discussion was occasioned by C. H. Ware's paper in reply to the query, "Can the Retail Pharmacist Make his own Secret Preparations with Financial Success to Himself?" It was finally decided that he could.

The election resulted in the choice of the following officers: President, Louis Schulze; First Vice-President, J. Webb Foster; Second Vice-President, Eli T. Y. Reynolds; Third Vice-President, Otto G. Schumann; Secretary, Owen C. Smith; Treasurer, John G. Beck, Baltimore; Executive Committee, W. U. Powell, W. E. Brown, H. Lionel Meredith.

The next annual meeting will be held at the Blue Mountain House about June 20, 1902, in joint meeting with the Pennsylvania Pharmaceutical Association, which meets at Buena Vista, Pa.

MASSACHUSETTS PHARMACEUTICAL ASSOCIATION.¹

The twentieth annual meeting was held at Fall River, June 11-12. F. A. Hubbard, the President, delivered an address devoted principally to the consideration of problems that confronted the pharmacists of that state. The Secretary, James F. Guerin, reported an increase in membership. The report of the Treasurer, T. B. Nichols, showed a balance in the treasury. The Committee on President's Address recommended among other things, "the endorsement of the work of the Massachusetts College of Pharmacy; the establishment of a scholarship in the College of Pharmacy, the expense to be \$130 per year, the board of directors of this Association to direct all the details of the scholarship."

The following papers were presented:

"Inter-Relation of Medicine and Pharmacy." By the late Professor Greenleaf. This was presented by C. F. Nixon, being the last work from the pen of Dr. Greenleaf and was somewhat incomplete, he evidently having expected to revise it.

"Pharmaceutical Legislation." By W. J. Bullock.

"Unregistered Clerks and Registered Druggists." Mr. Hielberg suggested a change in the pharmacy law to the effect that the Board of Pharmacy should have the power to grant a certificate for a limited time to registered druggist for his unregistered clerk.

¹ *New England Druggist*, p. 438; *The Spatula*, June; *Pharm. Era*, p. 690.

"Liquor Thymoli Compositus, or Antiseptic Solution." By W. L. Scoville. It differs from other similar formulas in using oil of *Eucalyptus odorata* instead of eucalyptus globulus, the former being much sweeter and more pleasant in flavor, and in the use of natural benzoic acid sublimed from benzoin in the place of artificial acid made from toluol. The natural acid is not only softer in odor and flavor, but it is also more soluble in water. Costs more than the artificial, but it produces a very different effect.

Thymol, 1 gramme or $\mathfrak{z}$ i; oil of *Eucalyptus odorata*, 2 c.c. or $\mathfrak{z}$ ii; oil of gaultheria, 0.75 c.c. or M xl; oil of peppermint, 0.20 c.c. or M x; natural benzoic acid, 8 grammes or $\mathfrak{z}$ i; fluid extract of baptisia, 8 c.c. or $\mathfrak{z}$ i; boric acid, 24 grammes or $\mathfrak{z}$ iii; alcohol, 375 c.c. or O iii; water, 675 c.c. or O v; talcum, 20 grammes or $\mathfrak{z}$ iiss.

Dissolve the thymol, oils, benzoic acid and fluid extract in the alcohol and add the talcum. Dissolve the boric acid in the water, previously heated, and add to the alcoholic liquid and shake occasionally during seven days or longer (the longer the better) then filter. The real secret (?) of the above formula lies in the variety of eucalyptus employed and the character of the benzoic acid.

"Glycerin Tonic Compound." By W. L. Scoville. Formula:

Gentian root, ground, 20 grammes; taraxacum root, ground, 30 grammes; sugar, 150 grammes; spirit of orange (U.S.P.) 10 c.c.; tinct. cardamom comp., 60 c.c.; solution of saccharin (N.F.) 20 c.c.; phosphoric acid (85 per cent.) 5 c.c.; acetic ether, 2.5 c.c.; glycerin, 400 c.c.; sherry wine, q. s. to make 1,000 c.c.

Moisten the drugs with the spirit of orange and about 10 c.c. of wine and pack in a small percolator. Pour on wine to cover the drugs and when the liquid begins to drop, close the lower orifice of the percolator and allow to macerate twenty-four hours. Then allow to drop slowly, regulating the flow to about one drop in five or six seconds, and pass enough sherry wine through the drugs to obtain 400 c.c. of percolate. In this dissolve the sugar and filter, if necessary. Then add the other ingredients in order, and finally enough sherry wine to make a total volume of 1,000 c.c.

The election of officers resulted as follows: President, L. G. Heinritz; First Vice-President, William J. Bullock; Second Vice-President, C. P. Flynn; Third Vice-President, James C. Brady; Secretary, James F. Guerin, of Worcester; Treasurer, Thomas B. Nichols. Henry Canning, Boston; F. E. Mole, of Adams and J. F. Bartlett, of Great Barrington, were re-elected trustees of the permanent fund. It was voted that the President, the three Vice-Presidents and the Secretary constitute the Executive Committee.

MISSOURI PHARMACEUTICAL ASSOCIATION.

The twenty-third annual meeting was held at Pertle Springs, Warrensburg, June 18-21, 1901. The address of the President, Paul L. Hess, embodied the events of the year in pharmaceutical

circles and was full of suggestions for the advancement of pharmacy. The Secretary, H. M. Whelpley, showed that 400 copies of the proceedings, containing eighty-six pages were printed at an expense of \$128.93. The average cost of each copy, including postage, amounts to about 35 cents. The Treasurer, Wm. Mittelbach, reported a balance in the treasury. The following papers were read :

"Carbon Molecules." By. J. F. Llewellyn.

"Pharmaceutical Notes." F. Hemm contributes the following : "Sodium phosphate (granular or crystallized) should be bottled in air-tight containers; crystallized sulphate of iron should be put into bottles; and a new air-tight stopper, but one easier of removal is desired for potassium bromide bottle. Sealing wax has been used on chloroform and bromoform containers lately and should be condemned. On dispensing a proprietary preparation on the doctor's prescription the writer suggests that the pharmacist only dispense from an original bottle or package—or when this is not possible, let the prescription pass on. The author also notes that according to Merck's Index sparteine sulphate is always acid in reaction whereas the U. S. P. says that it reacts neutral with litmus paper."

"The German, British and United States Pharmacopœia." G. Hinrichs critically compares these three authorities and hopes that "the Committee of Revision will produce a Pharmacopœia that will permit them to keep alive when that Pharmacopœia shall be enforced."

"Medicines Prescribed by 108 St. Louis Physicians." H. M. Whelpley gives some interesting statistics.

"Compound Extract of Salyx." A. C. Chenoweth and W. K. Ilhardt found it to be a name for a preparation containing salicylic acid, put upon the market for preserving fruits, vegetables and liquids by California cold process.

"Some Narcotic Plants." J. F. Lewellyn gives an interesting account of narcotics which are used and some of the myths concerning them.

"Preserved Hydrogen Peroxide." C. G. Hinrichs suggests that pharmacists test the brands marked 3 p. c. U.S.P. for the presence of alcohol and for the degree of acidity.

"Powdered Cocoa." Francis Hemm reported on the examination of four commercial brands.

"Mistura Chlorali et Potassii Bromidi Composita." H. M. Pettit, Chairman of the Committee on National Formulary asks, in his report, "would it not be well to omit the extract of Cannabis Indica or replace it by some other ingredient to answer the same purpose?"

The following officers were elected for 1901-1902 :

President, Otto F. Claus; First Vice-President, R. L. Hope; Second Vice-President, W. B. Kerns; Third Vice-President, H. C. Wesner; Treasurer, Wm. C. Mittelbach; Secretary, H. M. Whelpley. The place and date of next meeting is Pertle Springs, June 10-13, 1902.

NEBRASKA PHARMACEUTICAL ASSOCIATION.¹

The twentieth annual meeting was held May 7-9th, at Lincoln. The President, A. W. Buchheit, in his address, among other things, said that while the examinations in pharmacy, materia medica, chemistry and toxicology are certainly the necessary and fundamental requirements for a candidate's fitness for a certificate, a thorough general education, at least that afforded by a complete course in the high schools, should be required.

An interesting feature of the meeting was a lecture by Prof. Oscar Oldberg, Northwestern University.

The following officers were elected for the ensuing year: President, P. Strausbaugh; Vice-Presidents H. E. Brown, E. J. Kelso, J. F. McKinley, Victor Yoeman, C. E. Hopping; Secretary, W. M. Tonner, Randolph; Treasurer, Carl Speilman. Recommended for Board of Examiners: D. J. Fink, Holdredge; W. W. Kendall, Superior; N. A. Kuhn, Omaha.

NEW JERSEY PHARMACEUTICAL ASSOCIATION.

The thirty-first annual meeting was held in Trenton, N. J., May 22 and 23, 1901. The President, Stephen D. Wooley, delivered an address devoted to a recapitulation of the chief events in the history of the Association during the past year. The report of the Secretary, Frank C. Stutzlen, showed a membership of 383, an increase of 19 over last year. The report of the Treasurer, James C. Field, showed the finances of the Association to be in good condition. The Secretary of the Board of Pharmacy, Henry A. Jorden, showed that 74 passed the examinations for Registered Pharmacists, and 18 for Registered Assistants; and that the total number on record in good standing of Registered and Assistant Pharmacists was 1776. The report of the Treasurer of the Board of Pharmacy, William T. Brown, showed the finances to be in good condition.

The following is a list of the papers which were presented:

"The Growth and Collection of Narcotic Drugs." By F. B. Kilmer. The author considered particularly those drugs indigenous to Jamaica, the continent of Europe, England and United States.

"Cotton Seed Oil." By P. E. Hommell. The author considers the use of cotton seed oil in the preparation of various medicaments and claims that olive oil should replace it for medical purposes.

¹ *Omaha Druggist*, p. 20.

"Alcohol Deodoratum." By P. E. Hommell. The author concludes that deodorized alcohol should replace alcohol in the preparation of elixirs, essences and tinctures.

"Collinsonia Canadensis." By H. J. Lohmann. The author has isolated an alkaloid to which he attributes the diuretic action of the drug, the resin being irritant.

"Condurango." P. E. Hommell. The author says that preparations from good, well-preserved specimens would form valuable alteratives, if one or more of the recognized mineral alteratives were also added.

"Liquor Ammonii Anisatus." G. W. Parisen gives the formulæ of the German and Danish Pharmacopœias. G. E. Thurman proposes the formula: Oleum anisi, 3 parts; aqua ammoniæ, 15 parts; alcohol, q. s. to make 100 parts.

"Liniments, Ointments and Plasters." G. W. Parisen has observed in an examination of 4,000 prescriptions that there were thirty-eight liniments, fifty-six ointments, but no plasters prescribed.

"The Education of Apprentices" was answered by C. J. Schudde, who said that the pharmacist should take as an apprentice a boy with sufficient knowledge of reading, writing and arithmetic, and make a business man as well as a pharmacist of him.

"Hospital Dispensaries." C. H. Landell asserts that "four out of every ten dispensary patients can afford to pay for their medicines, and to give such persons free medicine is no charity in the least."

The following officers were elected for 1901-1902: President, James Foulke; First Vice-President, Hermann J. Lohmann; Second Vice-President, George S. Campbell; Secretary, Frank C. Stutzlein; Treasurer, James C. Field. The next meeting will be held at Atlantic City.

NEW YORK PHARMACEUTICAL ASSOCIATION.¹

The twenty-third annual meeting was held in Buffalo, June 4-8, 1901. The President, Felix Hirseman, in his address, dwelt upon the accomplishments of the N.A.R.D. and upon the passage of the new pharmacy law. The report of the Secretary, J. B. Todd, showed the Association to be in healthy condition. The Treasurer, T. W. Dalton, reported a creditable balance. The following papers were presented:

"The Lloyd Reaction for Morphine." By Joseph Mayer. (See this JOURNAL, p. 353).

"Synthetic Remedies as Poisons." By Edward Klein.

"The Habitat of Drugs." By Walter Bryan (See *Pharm. Era*, p. 670).

"Shop Notes and Dispensing Hints." By W. A. Dawson.

¹ *Amer. Drug. and Pharm. Record*, p. 327; *Pharm. Era*, p. 651.

"A Few Facts About Vaccine and Vaccination." By Frederic P. Tuthill. (See *Bull. Pharm.*, p. 334).

"The Advertising Druggist." By Judson B. Todd.

"Should the Pharmacy Law be Amended?" By Edward S. Dawson. (See *Amer. Drug.*, p. 15).

The Committee on New Remedies presented a valuable report (*Amer. Drug.*, 355) through the Chairman, A. L. Goldwater.

The following are the officers for 1901-1902: President, Thomas Stoddart; First Vice-President, J. F. Van Nort; Second Vice-President, Geo. H. Hitchcock; Third Vice-President, A. S. Van Winkle; Secretary, Judson B. Todd; Treasurer, Thomas W. Dalton.

The preliminary report of the President, Robert K. Smither, of the New York State Pharmacy Board, is interesting, particularly that relating to the adulteration and substitution of drugs.

The Board of Pharmacy being required by the new law to see that all pharmaceutical preparations sold in pharmacies and drug stores of New York conform to the standard and tests prescribed in the U.S.P.

"The Board has started out with the assumption that the average druggist or pharmacist is desirous of having his drugs and galenical preparations fully up to the standard, and that whenever it is demonstrated that he is handling an inferior quality he will gladly remedy the defect; and further, that among those who have knowingly handled an inferior article are not a few who, weakly surrendering to a spirit of commercialism, have felt constrained to depreciate the quality of their goods in order to meet competition, and who would be more than willing to elevate their standard to that required by the Pharmacopœia if satisfied that their competitors would be compelled to do likewise.

"We have begun the systematic collection and assaying of samples in a friendly spirit, our inspectors on their first tour making no secret of the fact that the samples purchased are for examination, that it is the purpose of the Board to warn the dealer in cases where the samples prove to be below the standard, but not to prosecute upon the evidence thus obtained.

"If, however, a subsequent inspection should reveal an intentional and persistent disregard of the standard the Board will consider it its duty to prosecute the offender.

"An illustration of the necessity for official supervision over the standard of pharmacopœial preparations sold, is furnished by a review of a report received within the past week from a professional chemist, giving the result of his assay of a batch of samples submitted to him.

"Forty-three samples of the tincture of iodine were assayed, the U.S.P. standard for which requires approximately 7 per cent. of free iodine. They showed a strength varying from 1.42 to 7.28; forty-one were below the U.S.P. standard. The lowest in the scale, a little more than one-fifth pharmacopœial strength, was made of wood alcohol as a solvent. Whatever may be said of some of the other samples, the most charitable comment upon the vendor of

this one is that gross fraud was intended. One sample purchased as tincture of iodine turned out to be fluid extract of wild cherry bark, an inexcusable blunder on the part of the seller.

"Assays of thirty samples of tincture of opium were contained in the same report. The pharmacopœial standard for this requires 1.3 to 1.5 per cent. of morphine. The samples submitted showed a variation in strength ranging from 0.35 to 1.6, the lowest being one-quarter the U.S.P. strength and the highest slightly above it. Of the thirty samples, only six were up to the minimum standard of the Pharmacopœia, and but one sample slightly exceeded the maximum. The average strength of the thirty samples was 1.05, but this average was largely produced by eight specimens, which were below one-half U.S.P. strength.

"That so important a preparation as tincture of opium should be sold of such inferior quality is a scandal to our profession and a gross injustice and menace to the public."

NORTH CAROLINA PHARMACEUTICAL ASSOCIATION.¹

The twenty-second annual meeting was held at Winston-Salem, on June 18th. The President, R. H. Jordan, in his address made a special plea for efforts to increase the membership. At the organization of the Association in 1880 its membership roll was 112, to-day 147, showing that the increase is only 32 per cent. for the twenty-one years, or about one and two-third members annually. While it is understood that death and retirement from business were factors that reduced the percentage largely, the increase is inexcusably small as compared with the enrollment of registered pharmacists, which at the same time was 282, and to-day 530, nearly double. He also called attention to the gradual decline of interest in scientific and practical papers and discussion, a condition which is deplored by the leaders in other pharmaceutical associations, both State and local, besides the North Carolina body.

The following officers were elected: President, E. W. O'Hanlon; Vice Presidents, Henry T. Hicks, W. A. Leslie, G. K. Grantham, Secretary, A. J. Cook, Fayetteville; Executive Committee, B. B. Owens, G. R. Wooten, J. M. Scott, W. H. Macnair; Local Secretary, C. G. Branhan, New Bern.

OHIO PHARMACEUTICAL ASSOCIATION.

The twenty-third annual meeting was held at Dayton, O., July 16th.

¹*Amer. Drug.*, p. 22

The President reviewed the events of the year and called attention to some of the problems confronting the pharmacists of that State.

The reports of the various committees were read and accepted. The chairman of the Committee on Course of Study in Colleges of Pharmacy made the following recommendations, which were adopted by the Association :

Item 1. That this Association requests the schools of pharmacy located in Ohio to require an entrance admission, leading to a degree, of at least one year's instruction in a standard high school, which should include algebra and natural science.

Item 2. That this Association reaffirms its position of 1896, that schools of pharmacy should have a fixed time for the admission of students who are candidates for a degree in pharmacy, which should be at or near the opening of the school year, and a definite time when the course leading to the conferring a degree shall close.

Item 3. That the Ohio Board of Pharmacy be, and is hereby requested to adopt a rule that after September 1, 1902, it will refuse to recognize as in good standing any school of pharmacy within or without the State of Ohio which fails to require and enforce an entrance qualification equivalent to that proposed in Item 1, or that fails to comply with the conditions relating to the admission of students and the conferring of degrees set forth in Item 2.

The initiation fee for new members was abolished.

The Association commended the Board of Pharmacy on the fact that the number of assistant registered pharmacists had been increased in the last two years.

An auxiliary section was formed and put on an active basis, the object of which will be to protect those members who may be unjustly persecuted or prosecuted under the existing or future laws of this State, to take care of any cases against them, both in the lower and appellate courts, without individual expense to the druggist beyond his per capita fee for membership, membership to be restricted to members of the Ohio State Pharmaceutical Association. A central committee of six was appointed by the President, to have full charge and discretion in doing the work.

The privileges of the floor were extended to Mr. C. H. Jones, organizer of the Ohio Valley Druggists' Association, and to Mr. E. R. Cooper, organizer of the Northern Ohio Druggists' Association.

The following officers were elected for the ensuing year: President, J. C. Firmin; First Vice-President, Chas. Freericks, Jr.; Second Vice-President, G. C. Himmelman; Permanent Secretary, L. C. Hopp, Cleveland; Treasurer, J. H. Von Stein; Executive Committee, F. W. Herbst, J. P. Harley and John Kutchbach. The matter of time and place for next year's meeting was left to a central committee.

PENNSYLVANIA PHARMACEUTICAL ASSOCIATION.¹

The twenty-fourth annual meeting of the Pennsylvania pharmaceutical Association was held at Harvey's Lake, near Wilkesbarre, Pa., June 18-21. After the usual welcome, the President, S. K. Hammond, made the annual address.

The reports of the Secretary and Treasurer were then received, the latter reporting a creditable balance. The Executive Committee presented their report through Mr. Gorgas, eighteen new members being received.

A communication was received from the Secretary of the N.A.R.D., stating that the Association was entitled to one delegate for each 100 members. A communication was presented relative to the proposed Procter Memorial, and was referred to the Committee on President's Address.

W. L. Cliffe, Chairman of the Committee on Legislation, reported the failure to secure the desired legislation, as having been caused to some extent at least by the antagonism felt by many of the legislators to the State Pharmaceutical Examining Board. He reported the passage of an act repealing the re-registration clause of the pharmacy law, and increasing the fees for registration after examination.

A number of reports were received from various local associations, indicating increased prosperity from organization. Mr. Pritchard, of the Western Pennsylvania Retail Association, stated that the conditions in his Association at the present time were more favorable than he had ever known them.

¹ Credit is due to Dr. J. A. Miller, F. W. E. Stedem and Prof. C. B. Lowe for courtesies in the preparation of this report.

The Committee on Trade Interests reported that chairmen had been appointed for each county in the State, and that an effort had been made to secure the organization of county societies to be affiliated with the Pennsylvania Association. At the present time there are some thirty local societies in the State. Reports were received from the Committee on Adulterations, by Mr. LaWall, the Committee on Membership, by Mr. Bransom, the Committee on Chemistry, by Prof. Moerk, and the Committee on Botany, by Prof. Kraemer.

The Committee on Free Dispensaries reported through Prof. Remington that a meeting of the joint committee of this Association and the State Medical Association had been held. They recommended that a law be passed requiring the keeping in each dispensary of a register in which all recipients of medicine shall be required to *sign* their names and residences, with penalties attached for imposing upon the hospital authorities. The recommendation was agreed to, and the Secretary ordered to send a copy of this action to the Secretary of the State Medical Society, and to our delegates to that society.

The reports of the delegates to the different State and National Associations were then presented.

An order was directed to be drawn upon the Treasurer for the amount of \$50 in favor of the Committee on Legislation, and the thanks of the Association were ordered to be presented to the Philadelphia Retail Druggists' Association for their hearty financial support to secure the needed legislation. Mr. Cliffe reported that the committee to secure a portrait of the late Chas. A. Heinitsh had been quite successful, and that an excellent portrait had been hung in the Museum of the Philadelphia College of Pharmacy.

The following officers were elected for the ensuing year: President, W. L. Cliffe, Philadelphia; First Vice-President, W. F. Horn, Carlisle; Second Vice-President, Isaac M. Weills, Washington; Secretary, Dr. J. A. Miller, Harrisburg; Treasurer, J. L. Lemberger, Lebanon. Executive Committee, Wm. O. Frailey, Lancaster; J. H. Stein, Reading, and E. E. Heck, Pittsburg. Local Secretary, H. J. Mentzer, Waynesboro.

The next meeting will be held at Buena Vista Springs Hotel.

The following is a list of the papers read:

"The Aniseed Oils and Anethol." By George R. Pancoast, M.D., and Lyman F. Kebler. (See this JOURNAL, p. 356.)

"Method for Determining the Value of Chromic Acid and the Soluble Chromates." By Lyman F. Kebler. (See this JOURNAL, 395.)

"Cold Cream." Theodore Campbell submitted the following formula which is somewhat similar to one devised by W. C. Alpers and published in this JOURNAL, 1901, p. 117.

Spermaceti, 125 grammes; White Wax, 120 grammes; Mineral Oil, 600 c.c.; Stronger Rose Water, 190 c.c.; Borax, 5 grammes; Oil of Rose, gtt. 5.

Cut wax and spermaceti in small pieces, add oil, apply gentle heat, to about 140° F. Dissolve borax in rose water, apply gentle heat, same temperature as wax and oil.

Add aq. rose and borax, previously heated, to the oil and waxes, without stirring and then stir rapidly and continuously until mixture becomes uniformly soft and creamy. When cool, add oil of rose.

"Oleate of Mercury." F. W. E. Stedem states that this oleate may be preserved by the use of petroleum jelly. The oleate is made as directed by the U.S.P., using but 75 per cent. of oleic acid and after the solution is complete, 25 per cent. of white petroleum jelly is added.

"Tabulation of 1,000 Prescriptions." By C. H. LaWall and M. W. Bamford.

"The Analysis of 1,000 Prescriptions." By S. Reed Hassinger.

"Toxins and Antitoxins." Prof. C. B. Lowe gave a popular talk on this subject.

"Native Drugs." By Isaac M. Weills. The author gives an account of the medicinal plants gathered almost entirely on his own grounds in Washington, Pa., samples of which he exhibited in connection with the paper.

"The Deterioration of Artificial Foods." By Charles H. LaWall. This will appear in a later issue of this JOURNAL.

"Laboratory Notes." By Robert C. Pursel and Willard R. Graham. These will be published in a later issue of this JOURNAL.

F. T. Gordon presented notes on the following:

"Wood Alcohol in the Preparation of Narcotic Fluid Extracts." The author made preparations of aconite, belladonna, cannabis indica, capsicum, conium, digitalis, nux vomica, hyoscyamus, stramonium and veratrum viride and found the fluid and solid extracts made with both methyl and wood alcohol to be practically

the same as the U.S.P. in regard to strength of active principle. (See Scoville, *Amer. Drug.*, September 11, 1890.)

"The Use of Wood Alcohol in the Preparation of Tincture of Iodine." The author concludes that it is unfit to be used unless a strong counter-irritant is desired and even then it should be used with caution. (See AMER. JOUR. PHARM., 1901, p. 285.)

The author says no substances will successfully counteract the odor of wood alcohol, but that the addition of more odorous substances (what ?) will mask the peculiar odor to some extent.

The commercial precipitated phosphate of calcium contains usually a small amount of calcium sulphate; one sample contained as much as 20 per cent. The presence of arsenic was ascertained in samples.

The aconite root of the market appears to be contaminated in a number of instances with roots of other species of aconitum, horse-radish, and inferior aconite.

Commercial phosphate of soda does not respond to U.S.P. tests for arsenic, but two samples showed traces of arsenic by the method of Dozzard and Cody (see also E. H. Gane in *Amer. Drug.*, 1900, p. 101).

Acetic acid as a menstruum may be used in the preparation of extract of gentian and ipecac. (See Squibb, *Amer. Jour. Pharm.*, 1899, pp. 1 and 305; 1900, pp. 1 and 311.) The author does not see any necessity for change of name in fluid or solid extracts made with acetic acid.

Collodion of the U.S.P. varies in consistency depending upon the gun cotton. One manufacturer allows the collodion to stand six months after preparation before selling it. He also uses a slightly greater proportion of alcohol.

A process of assay of veratrum album is given, being a modification of method given by Lyons, acetic acid being used in the extraction.

"Note on Commercial Lard." (See Bamford, AMER. JOUR. PHARM., 1901, p. 29.)

The red coloration in carbolic acid appears to be due, as already pointed out by Walter (*Pharmaz. Jour.*, "Progress in Pharmacy and Therapeutics," Lehn and Fink, Feb., 1900, p. 55), to the action of ozone or hydrogen peroxide and traces of iron, contained in the container or acid itself. This is confirmed by the author.

"Vanillin." The author gives tests and method of estimation.

"Powdered Drugs." The author points out that if the manufacturer can establish a standard of assay for commercial reasons, the Pharmacopœia can certainly do as much for higher reasons.

"Assay of Cinchona Bark." The author recommends the process of Dr. Caspar (Lyon's "Drug Assaying,") estimating the quinine in total alkaloids.

"Laboratory Notes." The author offers some practical suggestions for making and keeping such notes.

"Powdered Drugs." F. W. E. Stedem states that he has found it impossible to produce a No. 60 power of aconite root without at the same time reducing the outside cortical layer to a very fine powder.

"The Prime Cause of Failure in Passing State Board of Pharmacy Examinations." Louis Emanuel stated that one of the causes was that many applicants were incompetent and that some of the leading colleges were lax in their graduation requirements.

"State Pharmaceutical Examining Board." Louis Emanuel presented a statement of facts concerning the activity of the Board as shown during the past year. This paper was referred to a committee who reported subsequently that the "Association pledges to the Pharmacy Board its most cordial support in its efforts to enforce properly the laws of this Commonwealth, but it distinctly condemns the methods that have been employed by the Board."

"Minor Surgery." By Dr. B. Franklin Stahl. After defining this division of surgery as given in the "American Text-Book of Surgery," the author states that the druggist is not qualified to attend to such work and should not be taught minor surgery. He, however, states that every well informed citizen should know what to do in an emergency threatening life or physical well-being.

"Applied Therapeutics for Pharmacists." D. J. Thomas is of the opinion that a course in applied therapeutics would be of advantage to graduates in pharmacy.

In a paper on "Is Alcohol a Stimulant or an Anæsthetic," D. J. Thomas endeavors to show that ethyl alcohol is an anæsthetic.

H. F. Ruhl presented a paper on "Advertising for the Pharmacist," and W. M. Chalfant gave one on "Does Advertising Pay."

"Worcester Plan." Charles Leedom presented a paper on this plan for the restoration of prices.

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PREFACE TO THE SECOND EDITION.

In this edition Part I has been entirely rewritten.

Some changes and additional statements have been made in Part II. Twenty-five prescriptions with comments have also been added, as well as fifty prescriptions without comments. The comments on the last were omitted so that the student can the better test his knowledge.

A table of solubilities for reference has been introduced. A table of average prices charged for prescriptions not requiring particular skill or calling for expensive ingredients is also appended. Attention is called to the complete index of prescriptions, which enables one to find at a glance any prescription containing a certain ingredient or combination of ingredients that is given in the book.

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